

How to Read the Test Reports MATHEMATICS

Overview of Grades 4, 8, and 11

Grade 4

Charts 4.1 – 4.4: Statewide by District Size Category (horizontal charts)

- Arranged from the bottom of the chart up beginning with the state and going up the left side of the chart in the order of district-size category, small to large.
- The district size categories and the number of students tested in that district size category are labeled.
- The percents along the bottom of the chart are the NPRs.

Grade 8

Charts 8.1 – 8.4: Statewide by District Size Category (horizontal charts)

- Arranged from the bottom of the chart up beginning with the state and going up the left side of the chart in the order of district-size category, small to large.
- The district size categories and the number of students tested in that district size category are labeled.
- The district size categories are by size of the district and type.
- The percents along the bottom of the chart are the NPRs.

Grade 11

Charts 11.1 – 11.4: Statewide by District Size Category (horizontal charts)

- Arranged from the bottom of the chart up beginning with the state and going up the left side of the chart in the order of district-size category, small to large.
- The district size categories and the number of students tested in that district size category are labeled.
- The district size categories are by size of the district and type.
- The percents along the bottom of the chart are the NPRs.

Mathematics, Grades 4, 8, and 11

Chart 1: 4, 8, 11 M

The chart below shows the National Percentile Ranks for grades 4, 8, and 11. Grades 4 and 11 scored an NPR of about 62% while grade 8 students scored 57%.

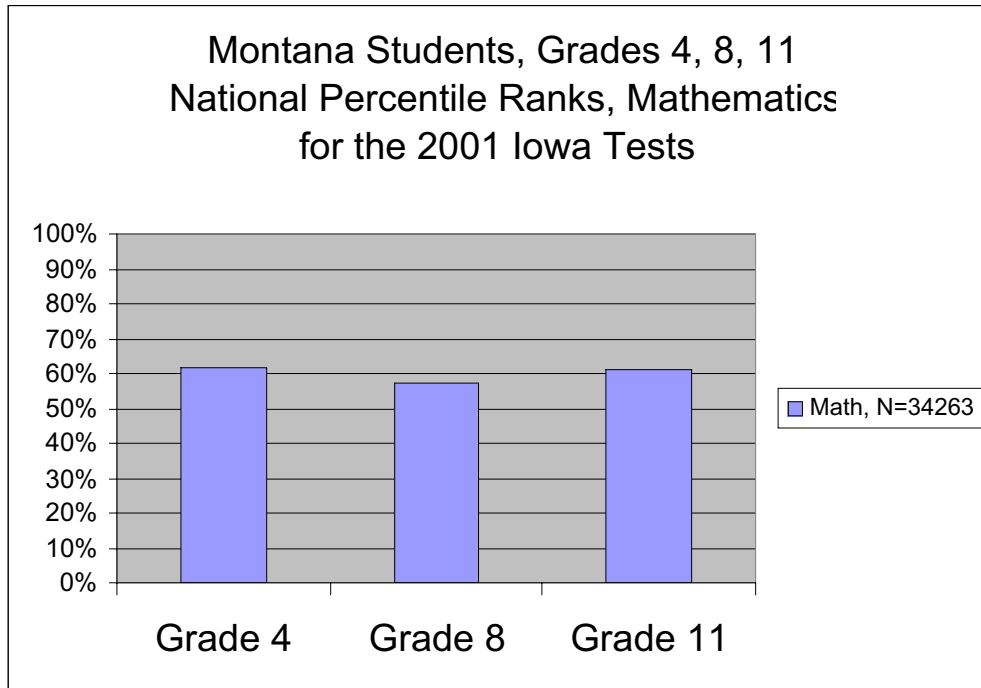


Table 1: 4, 8, 11 M

The table below shows the percentage of students for each disaggregation scoring in the combined Proficient and Advanced categories (P+A) and the Novice category for each of the three grades.

Groups	Grade 4		Grade 8		Grade 11	
	P + A Stanines 5-9	Novice Stanines 1-3	P + A Stanines 5-9	Novice Stanines 1-3	P + A Stanines 5-9	Novice Stanines 1-3
All Students	73%	12%	69%	16%	76%	12%
Students Without Disabilities	77%	9%	73%	12%	80%	9%
Students With Disabilities	36%	42%	20%	59%	24%	52%
Female Students	73%	12%	70%	14%	78%	10%
Male Students	74%	13%	66%	19%	76%	13%
Native American Students	47%	29%	35%	44%	48%	33%
White Students	77%	10%	73%	12%	80%	10%
Students on Free/Reduced Lunch	62%	20%	51%	30%	60%	23%

Table 2: 4, 8, 11 M

National Percentile Rank for each disaggregation Montana.

Groups	Grade 4	Grade 8	Grade 11
All Students	62%	57%	61%
Students Without Disabilities	66%	60%	64%
Students With Disabilities	31%	25%	26%
Female Students	60%	58%	60%
Male Students	62%	57%	62%
Native American Students	40%	33%	41%
White Students	66%	60%	63%
Students on Free/Reduced Lunch	51%	45%	49%

Table 3: 4, 8, 11 M

Customized Skills Reports: Montana Mathematics Standards tested in the Iowa Tests

Standard	Grade 4		Grade 8		Grade 11	
	# of Items	Percent Correct	# of Items	Percent Correct	# of Items	Percent Correct
Use math processes to solve problems, estimate and communicate.	29	64%	42	57%	29	55%
Use numbers and operations.	67	64%	81	53%	46*	56%
Use algebraic concepts, processes and language.	10	72%	18	58%	15*	56%
Understand shape and use geometry.	7*	66%	7*	53%	Na	Na
Understand and use measurement attributes and processes.	9*	52%	13*	55%	7*	46%
Use data analysis, probability and statistics.	16*	63%	19	68%	5*	62%
Use patterns, relations and functions.	Na	Na	4*	64%	5*	53%

* The Iowa Tests measure the knowledge dimension of the Montana Standard, but do not adequately measure the application aspect.

Table 4: 4,8 M

NAEP data from 1996 and 2000 are included to add to the picture of student achievement in Mathematics. Although NAEP data give another perspective to the picture of Montana students in grades four and eight tested in 1996 and 2000, these are not the same 4th or 8th grade students measured in the 2001 statewide assessment.

With the scores for Montana White and Montana Native American students are the percent of students who scored basic or above. It should be noted that the number of White students tested is considerably larger and therefore, generalizations are safer. For example, in the 2000 grade 8 test, 1,517 Montana White students and 117 Montana Native American students were included in the testing sample.

Grade:Year	Average Score					
	All National	White National	Native American National	All Montana	White Montana	Native American Montana
4: 1996	224	232	216	228	231 (76%)	209 (43%)
4: 2000	228	236	216	230	234 (78%)	212 (49%)
8: 1996	272	282	264	283	287 (79%)	265 (55%)
8: 2000	275	286	255	287	290 (84%)	253 (41%)

Table 5: 11 M

ACT Mathematics results for high school graduating class of 2001.

Average Score All National	Average Score All Montana	Average Score White Montana	Average Score Native American Montana
20.7	21.3	21.6	17.1

Of the 6,641 Montana students taking the ACT, 5,699 include White students and 319 include Native American students.

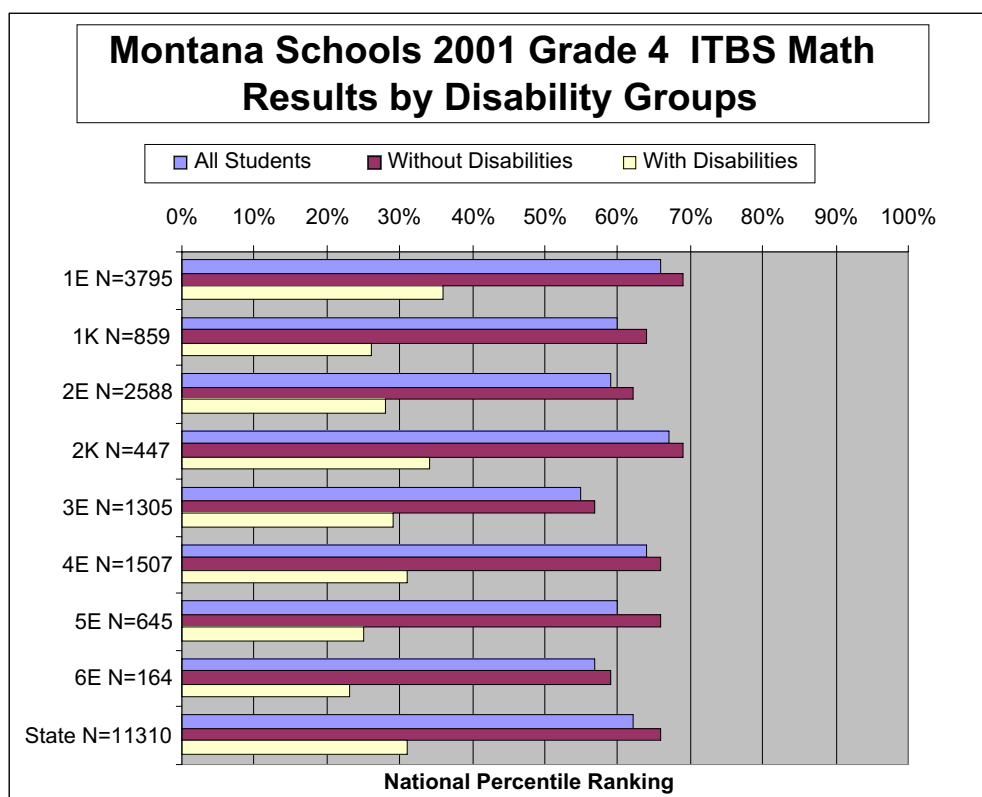
Table 6: 11 M

SAT Math results for the high school graduating class of 2001.

Average Score All National	Average Score All Montana	Average Score White Montana	Average Score Native American Montana
514	539	541	468

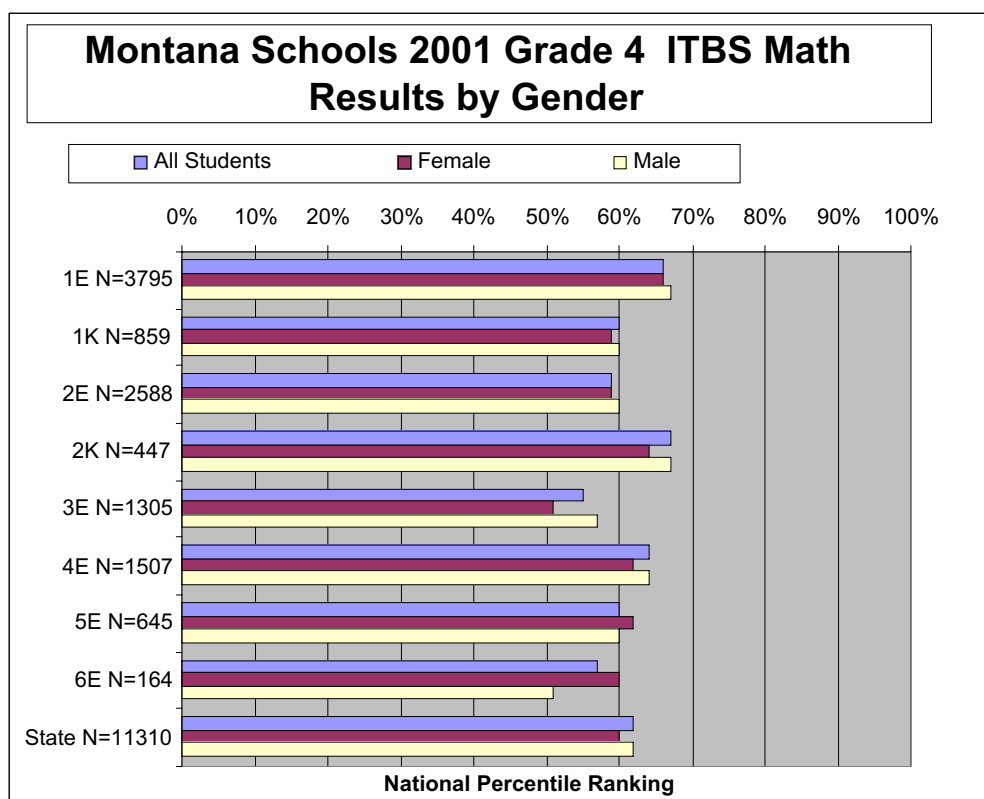
Of the 2,762 Montana students taking the SAT, 2,342 include White students and 39 include Native American students.

Chart 4.1M



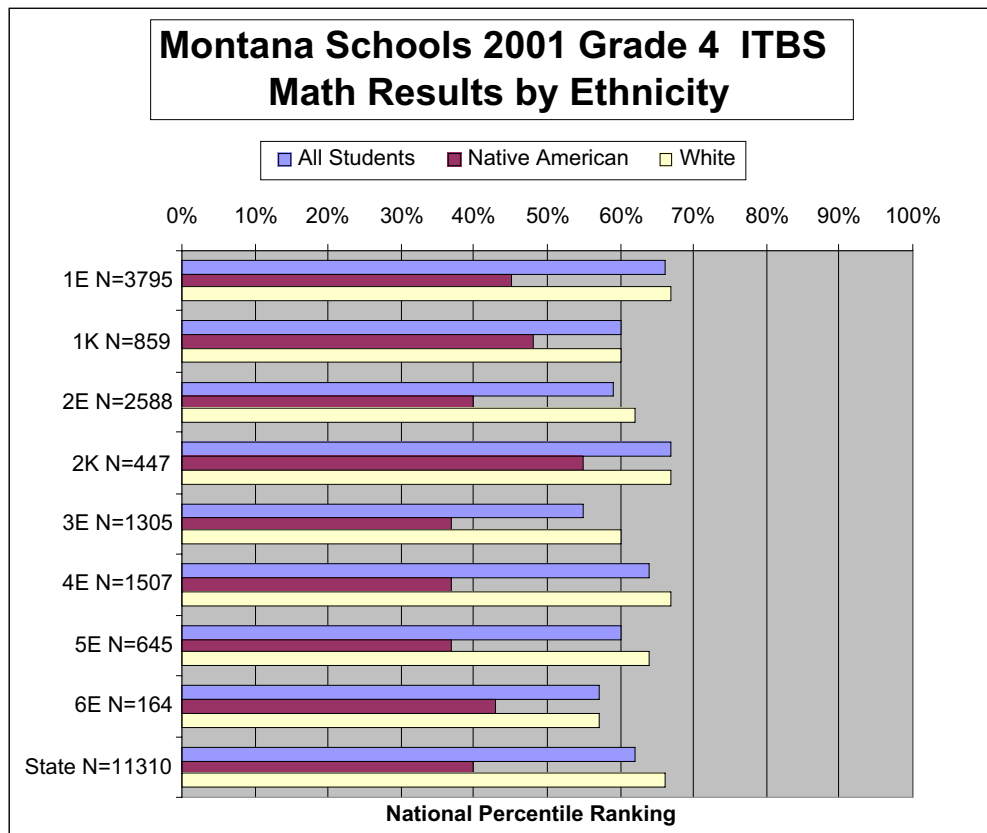
1. All students
 - The NPR for all Montana students is 62%.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 66%. This number is relatively stable with districts size categories plus or minus 3-4 percentage points except 3E with 57% and 6E with 59%.
3. Students with disabilities
 - Statewide, the NPR for students with disabilities is 31%. This number is relatively stable with most district size categories at plus or minus 3-4 percentage points except for district size category 1E (395 students, 36%) and a small number of students in district size categories 5E and 6E.
4. Students without and with disabilities compared
 - Statewide, Montana students without disabilities scored 35 percentage points above students with disabilities, 66% and 31% respectively. This number is stable with most district size categories 3-4 points plus or minus the 35 percentage points except for district size category 3E that has a difference of 28 points and 5E with a small number of students with disabilities tested.

Chart 4.2 M



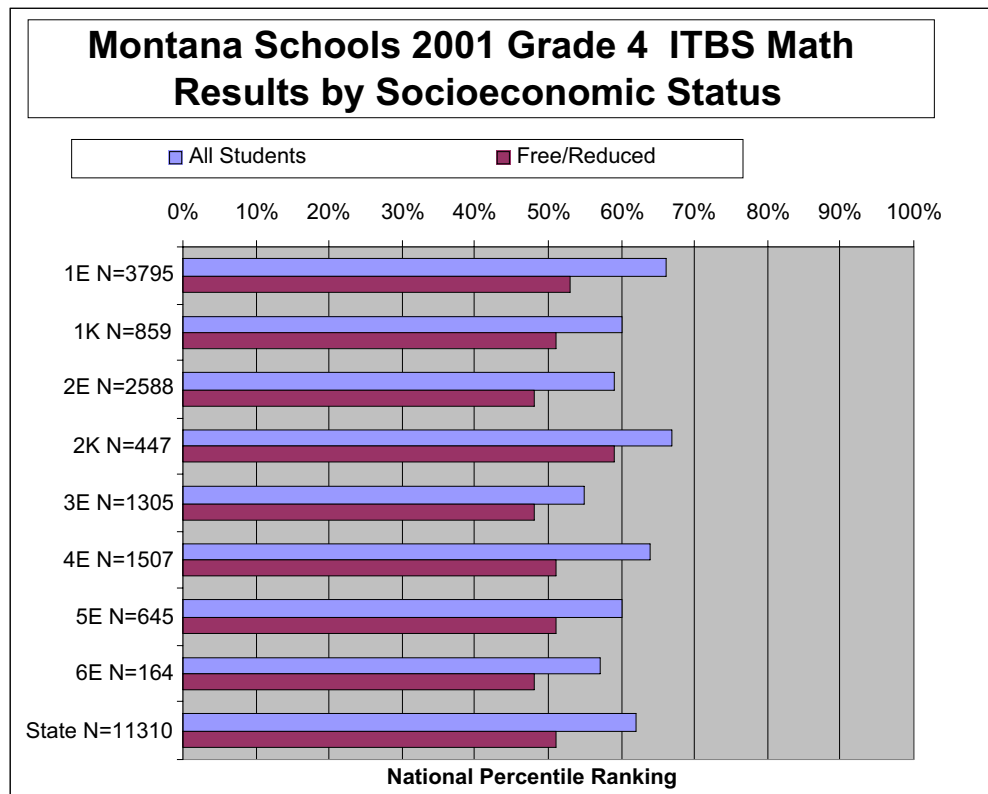
1. Male and female students
 - The NPR for all Montana students is 62%.
2. Female students
 - Statewide, the NPR for female students is 60%. That number is somewhat stable with all district size categories plus or minus 3-4 percentage points except for 3E (632 female students, 51%) and 1E (1885 female students, 66%).
3. Male students
 - Statewide, the NPR for male students is 62%. That number is somewhat stable with most district size categories plus or minus 3-4 percentage points except for district size categories 3E (673 male students, 57%), 1E (1903 male students, 67%) and 6E (79 male students, 51%).
4. Male and female students compared
 - Statewide, females scored two percentages points below the males, 60% and 62% respectively, except in 3E in which males scored six percentage points above females and 6E (85 females scored nine percentage points above the males).

Chart 4.3 M



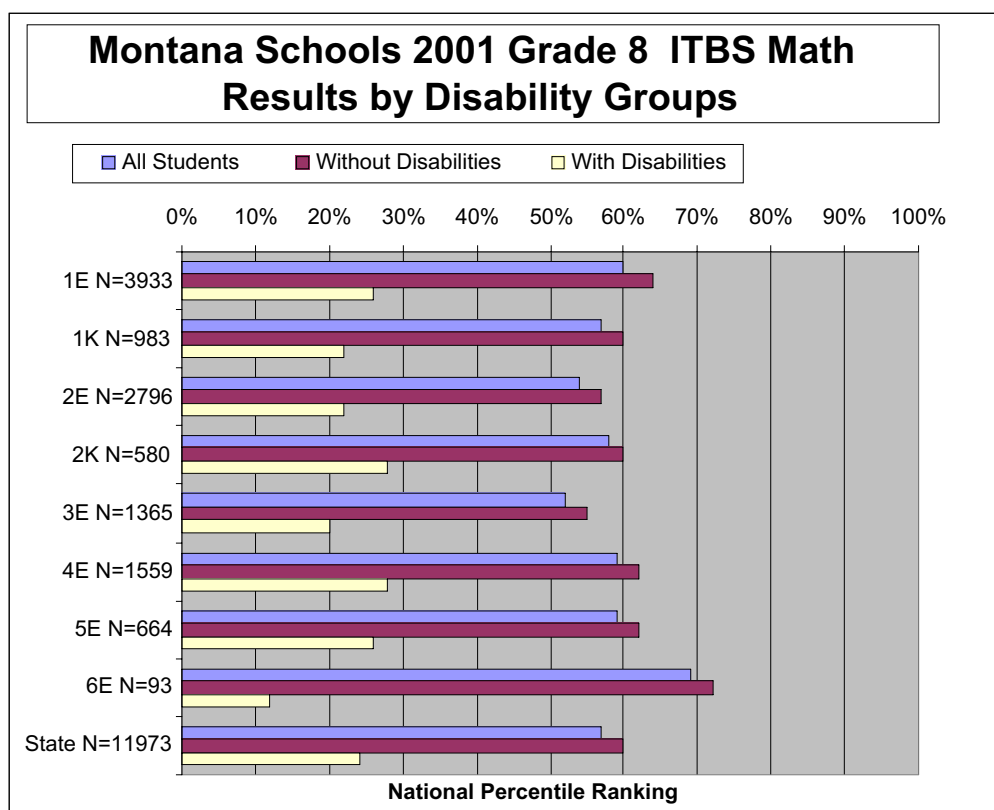
1. All students
 - The NPR for all Montana students is 62%.
2. Native American students
 - Statewide, the NPR for Native American students is 40%. This number is relatively stable with most districts plus or minus 4-5 percentage points except 2K whose 31 Native American students scored 55% and 1K whose 32 Native American students scored 48%. Both numbers are small, making the data less stable.
3. White students
 - Statewide, the NPR for the White students tested is 66%. This number is stable with most district size categories at plus or minus 2-3 percentage points except 6E whose 148 White students scored 57%.
4. Native American and White students compared
 - Statewide, Montana White students scored 26 percentage points above Native American students, 66% and 40% respectively. This number is relatively stable with most districts 4-5 points plus or minus the 25 percentage points. District size category 2K showed a smaller difference between Native American and White students, but the number of Native American students tested is too small for generalizations (a 12 point difference).

Chart 4.4 M



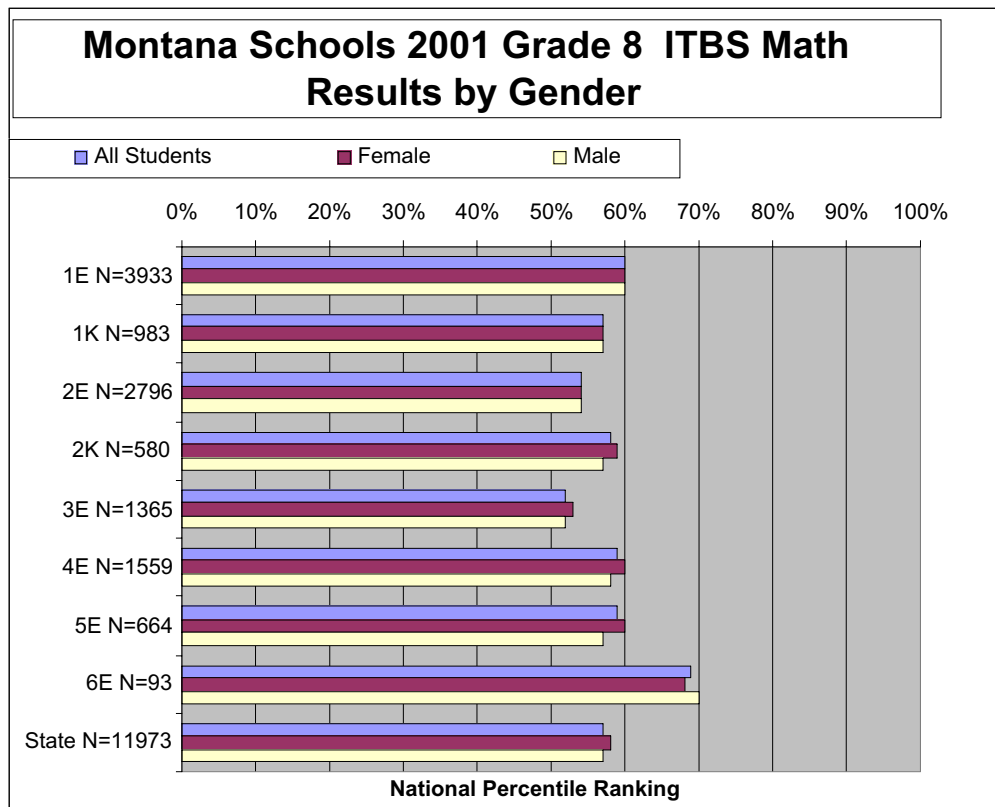
1. All students
 - The NPR for all Montana students is 62%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 51%. This number is relatively stable with all but one district size category scoring within plus or minus 3-4 percentage points. The 156 students in the 2K district size category who participated in free/reduced lunch programs scored 59%.
3. Comparison
 - Statewide, all Montana students scored 11 percentage points higher than those participating in free/reduced lunch programs, 62% and 51% respectively.

Chart 8.1 M



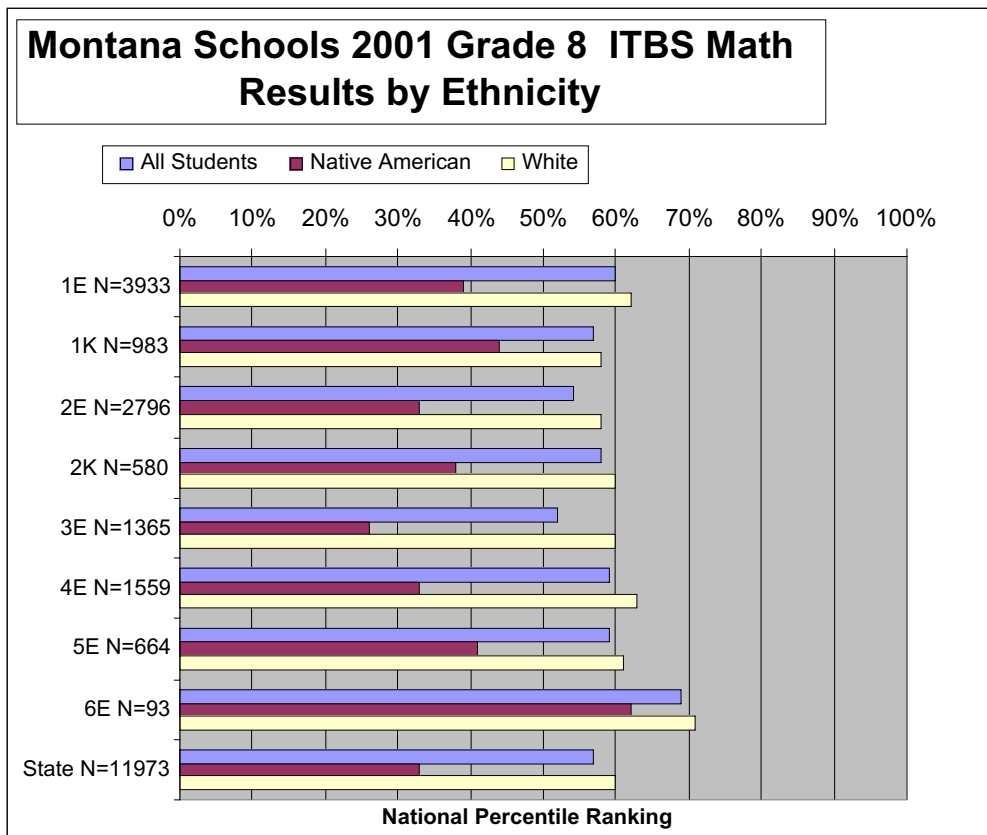
1. All students
 - The NPR for all Montana students is 57%.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 60%. This number is relatively stable with districts size categories plus or minus 3-4 percentage points except 6E with 89 students scoring 72%.
3. Students with disabilities
 - Statewide, the NPR for students with disabilities is 24%. This number is relatively stable with most district size categories at plus or minus 3-4 percentage points except for district size category 6E with a very small number of students with disabilities tested.
4. Students without and with disabilities compared
 - Statewide, Montana students without disabilities scored 36 percentage points above students with disabilities, 60% and 24% respectively. This number is stable with most district size categories 3-4 points plus or minus the 35 percentage points except for district size category 6E with a very small number of students with disabilities tested.

Chart 8.2 M



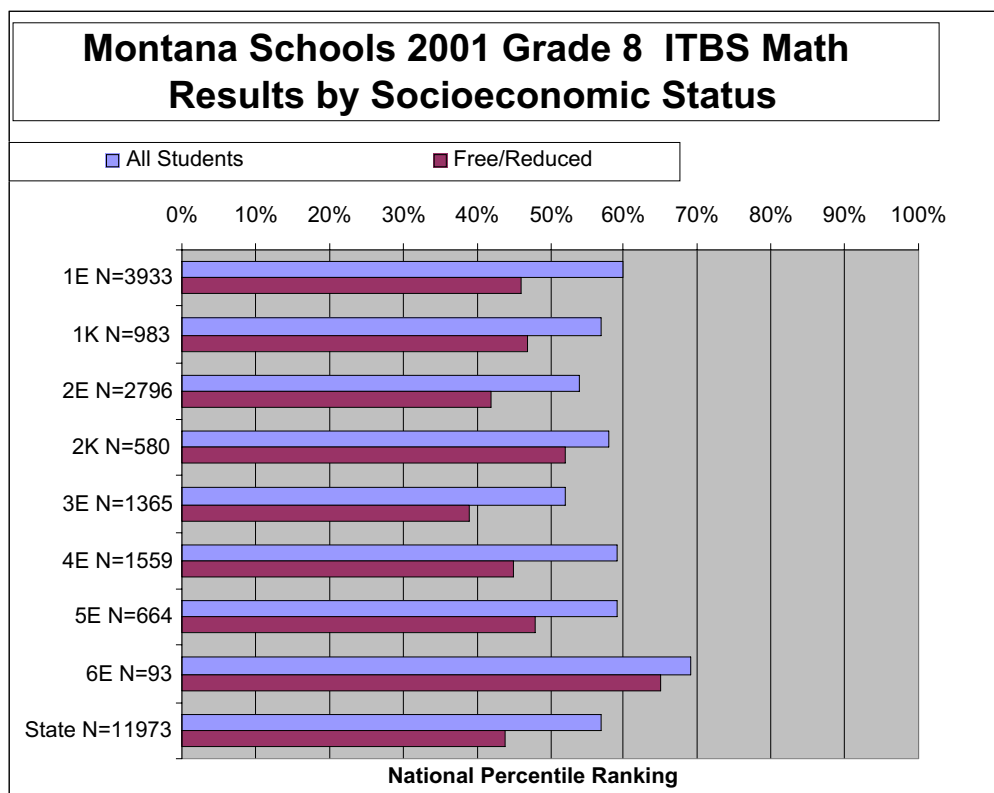
1. Male and female students
 - The NPR for all Montana students is 57%.
2. Female students
 - Statewide, the NPR for female students is 58%. That number is relatively stable with all district size categories plus or minus 3-4 percentage points except for 3E (659 female students, 53%) and 6E with a small number of female students tested.
3. Male students
 - Statewide, the NPR for male students is 57%. That number is stable with most district size categories plus or minus 3-4 percentage points except for district size 6E with a small number of male students tested.
4. Male and female students compared
 - Statewide, females scored one percentages point above the males, 58% and 57% respectively.

Chart 8.3 M



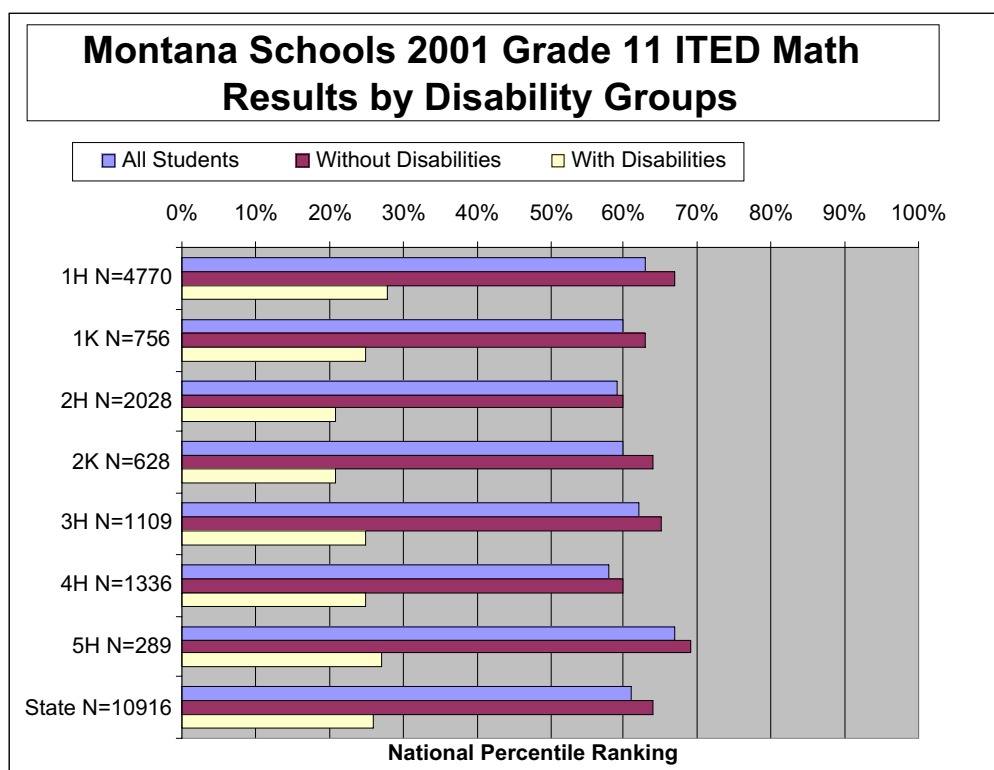
1. All students
 - The NPR for all Montana students is 57%.
2. Native American students
 - Statewide, the NPR for Native American students is 33%. This number is relatively stable with most districts plus or minus 6-7 percentage points except 5E whose 85 Native American students scored 41% and 1K whose 65 Native American students scored 44%. The number of students tested in these districts is small, making the data less stable. In 6E, the small number of Native American students tested makes the data too small for any comparisons.
3. White students
 - Statewide, the NPR for White students tested is 60%. This number is stable with most district size categories at plus or minus 2-3 percentage points except 6E whose small number of White students scored 71%, but the number is small making the data less stable.
4. Native American and White students compared
 - Statewide, Montana White students scored 27 percentage points above Native American students, 60% and 33% respectively. This number is relatively stable with most districts 6-7 points plus or minus the 27 percentage points. One district size category showed a larger difference between Native American and white students, 3E with a 34 point difference. District size 1K showed a 14 point difference, but the numbers are too small for comparisons.

Chart 8.4 M



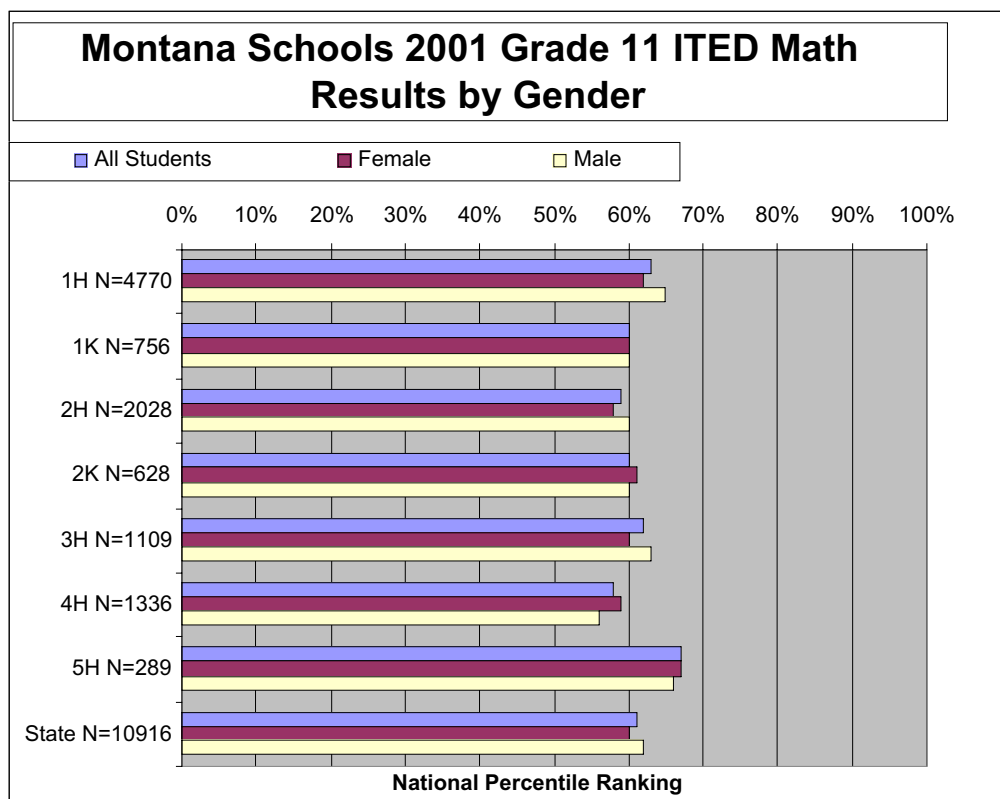
1. All students
 - The NPR for all Montana students is 57%.
2. Students participating in free/reduced lunch programs
 1. Statewide, the NPR for students participating in free/reduced lunch programs is 44%.
This number is relatively stable with most district size categories scoring within plus or minus 3-4 percentage points except 3E with 467 students scoring 39%, 2K with 169 students scoring 52%, and a very small number of students in 6E.
3. Comparison
 - Statewide, all Montana students scored 13 percentage points higher than those participating in free/reduced lunch programs, 57% and 44% respectively, except for students with disabilities tested in 2K who scored six percentage points below the average for all students statewide.

Chart 11.1 M



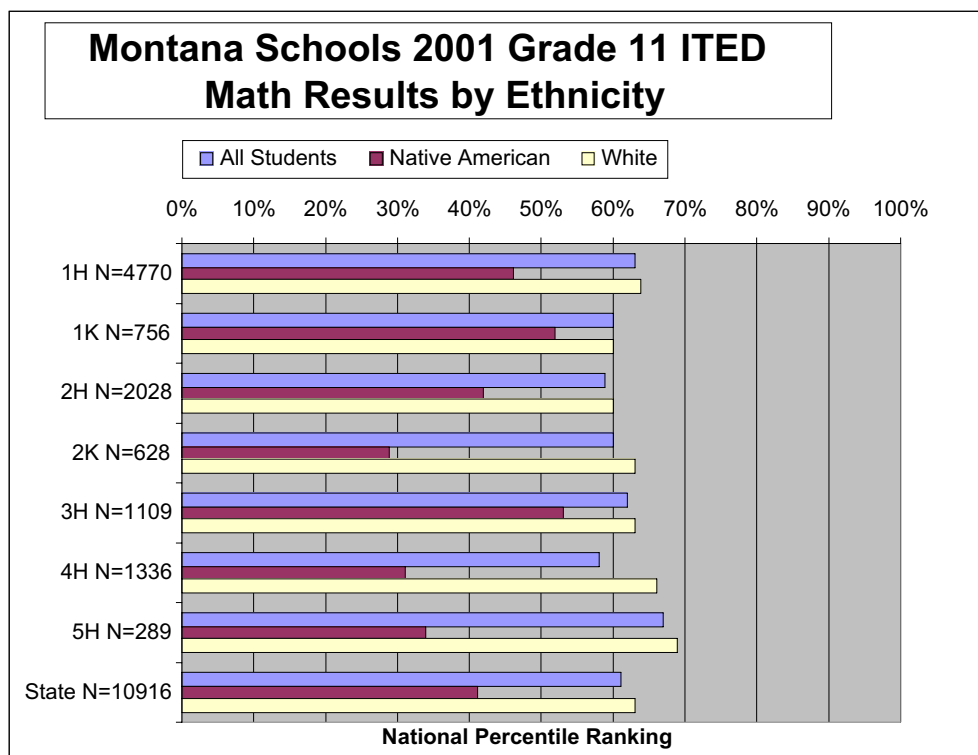
1. All students
 - The NPR for all Montana students is 61%.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 64%. This number is stable with all districts size categories plus or minus 3-4 percentage points.
3. Students with disabilities
 - Statewide, the NPR for students with disabilities is 26%. This number is relatively stable with most district size categories at plus or minus 3-4 percentage points except for district size categories 2H (99 students, 21%) and 2K with a very small number of students with disabilities tested.
4. Students without and with disabilities compared
 - Statewide, Montana students without disabilities scored 38 percentage points above students with disabilities, 64% and 26% respectively. This number is stable with most district size categories 3-4 points plus or minus the 38 percentage points except for district size category 2K with a very small number of students with disabilities tested.

Chart 11.2 M



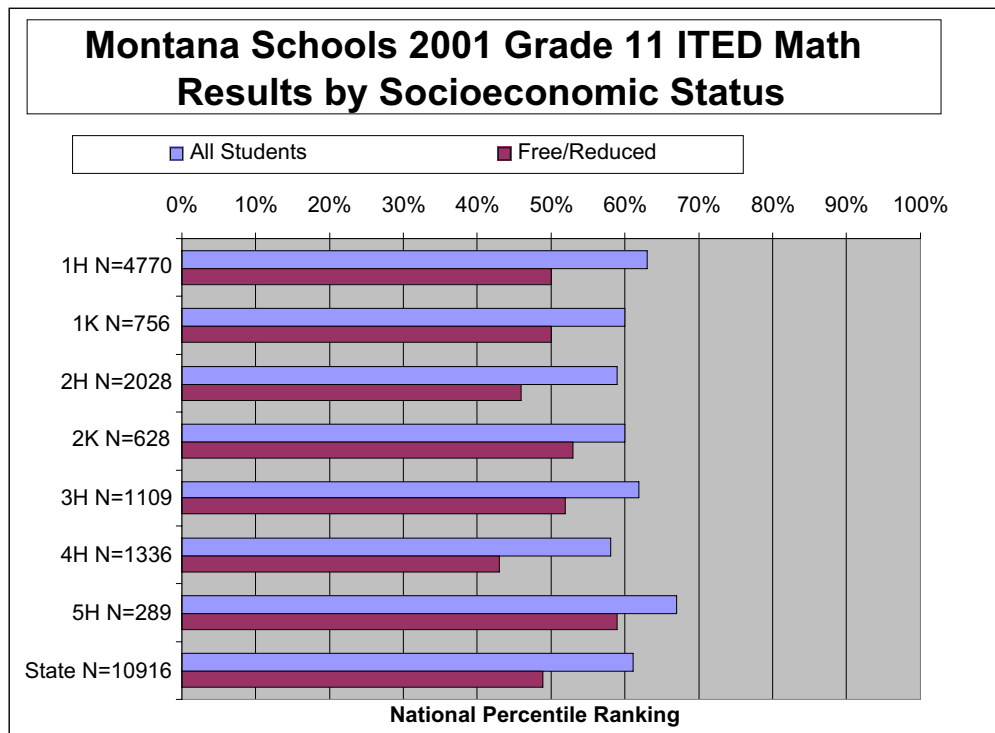
1. Male and female students
 - The NPR for all Montana students is 61%.
2. Female students
 - Statewide, the NPR for female students is 60%. That number is stable with all district size categories plus or minus 3-4 percentage points except for 5H (125 female students, 67%).
3. Male students
 - Statewide, the NPR for male students is 62%. That number is relatively stable with most district size categories plus or minus 3-4 percentage points except for district size category 4H (673 male students, 56%).
4. Male and female students compared
 - Statewide, females scored two percentage points below the males, 60% and 62% respectively.

Chart 11.3 M



1. All students
 - The NPR for all Montana students is 61%.
2. Native American students
 - Statewide, the NPR for Native American students is 41%. This number is relatively stable with most districts plus or minus 5-6 percentage points except 3H whose 90 Native American students scored 53%, 1K whose small number Native American students scored 52% and 2K with 31 Native American students scoring 29%. The number of students tested in 3H is small, making the data less stable. In 1K and 2K, the small number of Native American students tested makes the data too small for any comparisons.
3. White students
 - Statewide, the NPR for White students tested is 63%. This number is relatively stable with most district size categories at plus or minus 4-5 percentage points.
4. Native American and White students compared
 - Statewide, Montana White students scored 22 percentage points above Native American students, 63% and 41% respectively. This number is relatively stable with most districts 6-7 points plus or minus the 22 percentage points. Four district size categories, 4H and 5H (35 point difference), 3H (10 point difference), and 2K (34 point difference) varied from the overall difference with the numbers in 5H and 2K too small for comparisons.

Chart 11.4 M



1. All students
 - The NPR for all Montana students is 61%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 49%. This number is relatively stable with most district size categories scoring within plus or minus 4-5 percentage points except 5H with 81 students scoring 59% and 4H with 401 students scoring 43%.
3. Comparison
 - Statewide, all Montana students scored about 12 percentage points higher than those participating in free/reduced lunch programs, 61% and 49% respectively.